**Vehicle Maintenance Recommendations and Emergency Supply List**

Note: This list is designed for situations when cell service is limited and it is difficult to reach a mechanic’s shop or auto parts store. If your project is not in such a remote setting, feel free to adapt the list to your project location.

Maintenance Tips:

* Have an emergency kit for each vehicle. This should include items to make repairs, as well as supplies if riders cannot repair the vehicle and have to camp in or around the vehicle until help arrives. A sample vehicle supply kit list is included at the end of this supplemental document.
* Ensure routine maintenance is completed to reduce the chance of vehicle-related emergencies.
  + Know how to tell if the brakes are showing signs of wear.
  + Check the oil, transmission fluid, power steering fluid, windshield washer fluid, and coolant levels. Know how to change or add these fluids if levels are low.
  + Know what the appropriate pressure level is for the vehicle tires, how to check tire pressure, and how to put air in tires. This will extend the use-life of the tires and lessen the chance of flat or blown tires. If working in an area with snow or ice, know how to put chains on vehicle tires.
  + Check also the inspection and registration tags to make sure they are up-to-date.
  + Some maintenance items (e.g. tire pressure) should be checked daily, before leaving for daily fieldwork, others weekly or monthly.
* If using an equipment trailer, know the GVWR (gross vehicle weight rating) and legal load capacity for the tow vehicle and do not exceed those weights. Know how to connect and disconnect the equipment trailer and make sure the electric (turn signal, brake lights, etc.) connection to the trailer is working.
* Know how to jumpstart a car using jumper cables and know how to change a tire. Doing these tasks incorrectly can damage the vehicle and the people working on it.

Drivers’ Tips:

Know in advance which crew members have valid drivers’ licenses and whether any special licenses/vehicle trainings are needed to operate vehicles in the project location. If a project is outside of the United States, multiple crew members should know how to operate vehicles with manual transmissions. Ensure you have enough drivers; emergencies can become worse if the injured person is also the only person who can operate the vehicle.

Vehicle Supply Kit:

Each vehicle should contain a waterproof box(es) with the following items:

* jumper cables (if there is only one project vehicle, then having a portable battery charger is also necessary since there may not be access to another vehicle to jump the dead one)
* proper jack and tire iron for that vehicle (\*most vehicles come with these, but it is important to check that the vehicle does indeed have them, and make sure the spare tire is in good shape)
* tire patching materials (use as a last resort if cannot change the tire)
* tire chains for that vehicle
* bungee cords
* ratchet straps
* tow straps or tow chains
* cable puller (colloquially called a come-a-long) (\*this item needs to be mounted on the vehicle)
* wood blocks
* screw drivers
* pipe wrench
* adjustable wrench (or wrenches and ratchets that fit the vehicle)
* crescent wrench
* spare fluids (oil, windshield washer, power steering, transmission, coolant/antifreeze)
* spare belts (e.g. fan belts and serpentine belts)
* shovel
* tarp
* rags
* fire extinguisher
* duct tape
* work gloves
* water and non-perishable snacks (like granola bars)
* blanket(s) and spare jacket(s)
* signaling device, such as a signal flare or radio/walkie-talkie
* maps/directions for getting to important places around the project area
* first aid kit
* paper towels and toilet paper